

Amendment to the Specification (Pages 3 and 6)

FAX RECEIVED

JUL 07 2003

3

Figures 8 and 9 are top plan views of the profile, illustrating a third and a fourth embodiment of the undulations;

Figures 10 and 11 are enlarged-scale transverse sectional views of the profile, illustrating two possible shapes of the undulations;

Figure 12 is a perspective view of a concrete panel with a profile embedded.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

Official

With reference to the figures, the reinforcement according to the invention, generally designated by the reference numeral 1, comprises profiles 2-7 which are designed to be embedded into the concrete body of a panel 100.

Preferably, the reinforcement 1 comprises a frame-like structure composed of longitudinal profiles 2 and 3, which are connected one another by transverse profiles 4, 5, 6 and 7. Clearly, the number of longitudinal and transverse profiles can vary according to the requirements and to the dimensions of the panel to be provided.

Such profiles can have a substantially C-shaped transverse cross-section with two end wings 11 and 12 which are substantially parallel to each other and are joined by an intermediate wing 13.

Preferably, such profiles have a substantially Σ-shaped transverse cross-section (see Figure 5), with two end wings 11 and 12 which are substantially parallel to each other and are joined by an intermediate wing 13 having at least two portions 14 and 15 which are inclined with opposite inclinations.

In the illustrated embodiment, the intermediate wing 13 has a central portion 16 and two end portions 17 and 18 being joined to the end wings 11 and 12. The portions 16, 17 and 18, except for a reinforcement fold provided in an intermediate region of the extension of the portions 17 and 18, lie on planes which are substantially perpendicular to the planes of arrangement of the end wings 11 and 12 and are connected one another by the two inclined portions 14 and 15.

According to the invention, some or all of the profiles 2, 3, 4, 5, 6 and 7 that compose the reinforcement 1 have perforations or undulations which

USSN. 09/742,560

Examiner: YIP, WINNIE S

Group A.U.: 3637

July 3, 2003

constituted by plastic deformations of such profiles.

In practice it has been observed that the reinforcement according to the invention fully achieves the intended aim and objects, since the presence of the perforations, combined with the presence of the undulations, interrupts the continuity of the profiles and alters the planar profile of the faces of the profiles, thus achieving high bonding of the reinforcement to the concrete constituting the body of the panel.

In particular, the undulations, by affecting coplanar portions and variously inclined portions of the profiles, ensure high bonding between the reinforcement and the concrete regardless of the orientation of the stresses to which the panel is subjected. This achieves greater strength and longer life of the panel.

The reinforcement thus conceived is susceptible of numerous modifications and variations, all of which are within the scope of the appended claims; all the details may further be replaced with other technically equivalent elements.

In practice, the materials used, so long as they are compatible with the specific use, as well as the dimensions, may be any according to requirements and to the state of the art.